
ENVIRONMENT

INTRODUCTION

The environment is the sum of all parts; it encompasses our entire surroundings, the land we live on, the air we breathe, and the water we drink. Blessed with lush vegetation, 207 miles of shoreline, rolling hills, and bluffs, York County is an area of great natural beauty. It is also an area where these and other natural features pose many challenges to development. Development regulations in York County seek to encourage the proper use, management, and/or protection of sensitive and unique lands and waterways in the County that contribute to the economy of the region and the environmental quality of the County. They are not meant to preclude development or use of these areas but rather to ensure that any development that occurs is undertaken in recognition of environmental qualities and conditions.

Since the adoption of York County's Comprehensive Plan in 1991 and the revised County Zoning Ordinance in 1995, which was the subject of wide public discussion, the projected build-out population of the County was significantly reduced. While these changes will have a positive impact on the environment there are issues at both the state and federal level which have the potential to affect future development in the County

SUMMARY OF EXISTING CONDITIONS

AIR QUALITY

In general air quality in York County is good and is expected to remain so during the period covered by these revisions to this plan. York County has only two major sources of air emissions – the Amoco Refinery and the Virginia Power Station – and four federal facilities classified as minor sources.

Air quality in the County is regulated through implementation of the federal Clean Air Act. This legislation is reflected in regulations promulgated by the federal Environmental Protection Agency (EPA) which in turn are enforced by the Virginia Department of Environmental Quality through the State Implementation Plan (SIP). In this process National Ambient Air Quality Standards (NAAQSs) are enforced through permits for certain stationary sources and by other regulations affecting the operation and maintenance of certain mobile sources.

York County is part of the Hampton Roads Air Quality Region, which is currently in compliance with all applicable NAAQSs. Until recently this region was listed as a marginal non-attainment area for ozone (smog) but the EPA recently reclassified the region as an attainment area. As a result of this action York County could consider any industrial/commercial growth as long as proposed facilities meet the new source performance standards and the emissions would not cause a violation of the existing NAAQSs.

However, it is anticipated that continued tightening of standards by the EPA will probably result in more severe future emissions control limits on existing sources, prohibition of new sources of emissions and/or programmatic controls to reduce mobile emission sources.

LAND

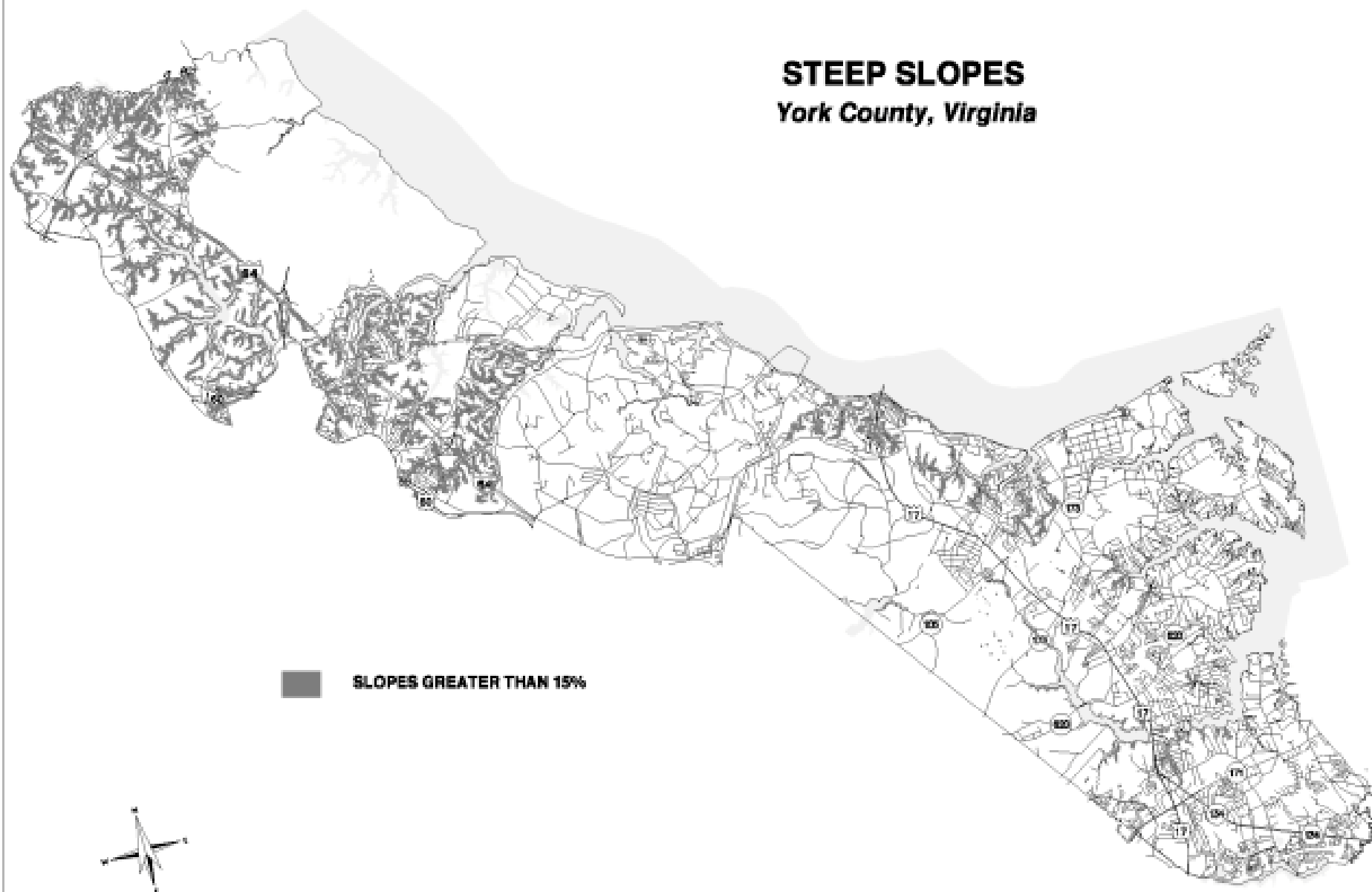
Topography

The topography of land in York County varies from generally low, flat land with high water tables in the lower County to rolling terrain with well-drained soils in the northern reaches at elevations of approximately 100 feet. The Steep Slopes map shows those areas in the County with slopes greater than 15%, which are subject to potential erosion and special Zoning Ordinance regulations to ensure the integrity of these slopes.

Soils

STEEP SLOPES

York County, Virginia



November 05, 1999
Prepared by York County
Computer Support Services

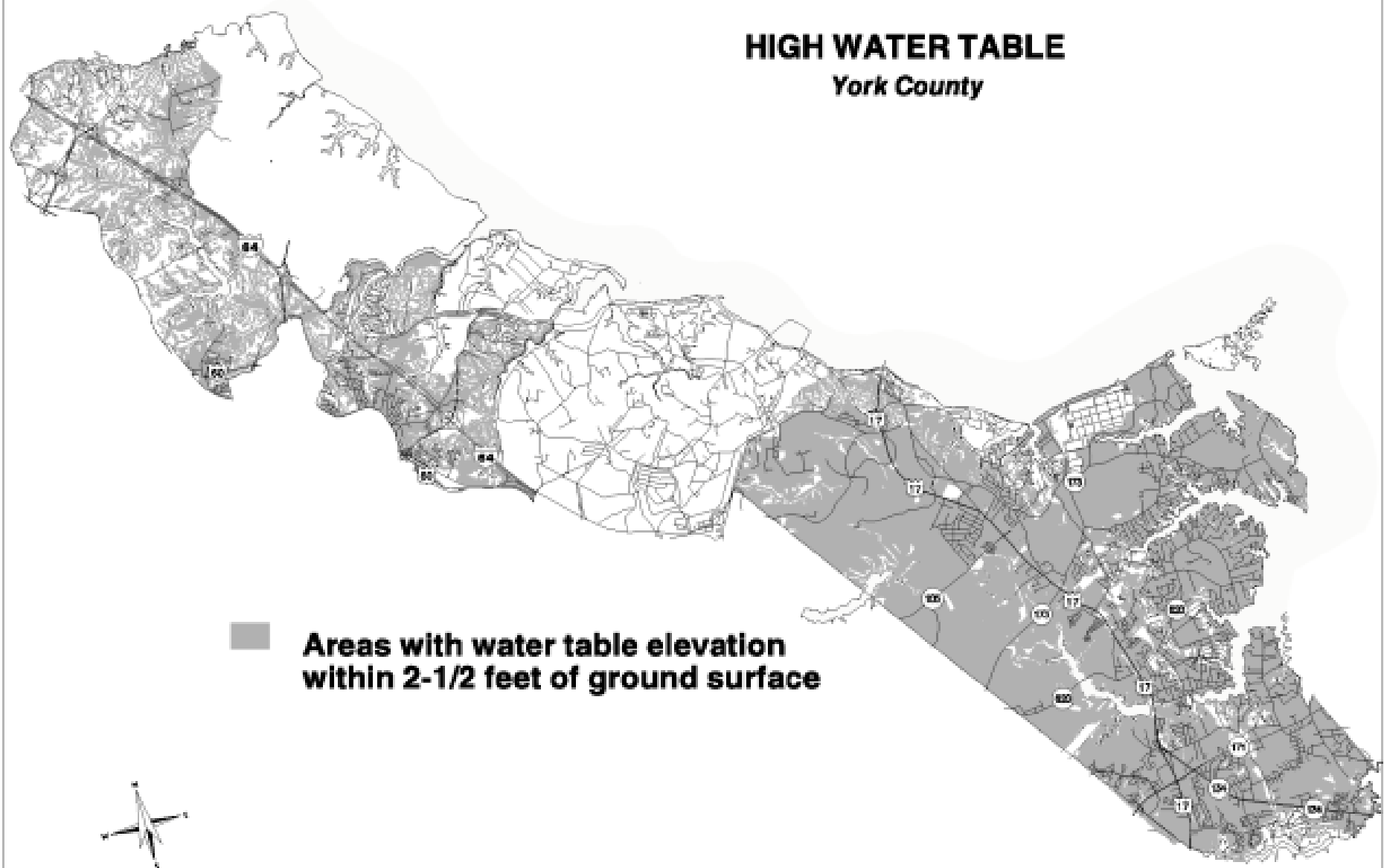
SHRINK/SWELL POTENTIAL OF SOIL
York County, Virginia

■ HIGH SHRINK/SWELL POTENTIAL
 ■ MODERATE SHRINK/SWELL POTENTIAL
 □ LOW SHRINK/SWELL POTENTIAL
 (or DATA NOT AVAILABLE)

November 05, 1999
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HIGH WATER TABLE

York County



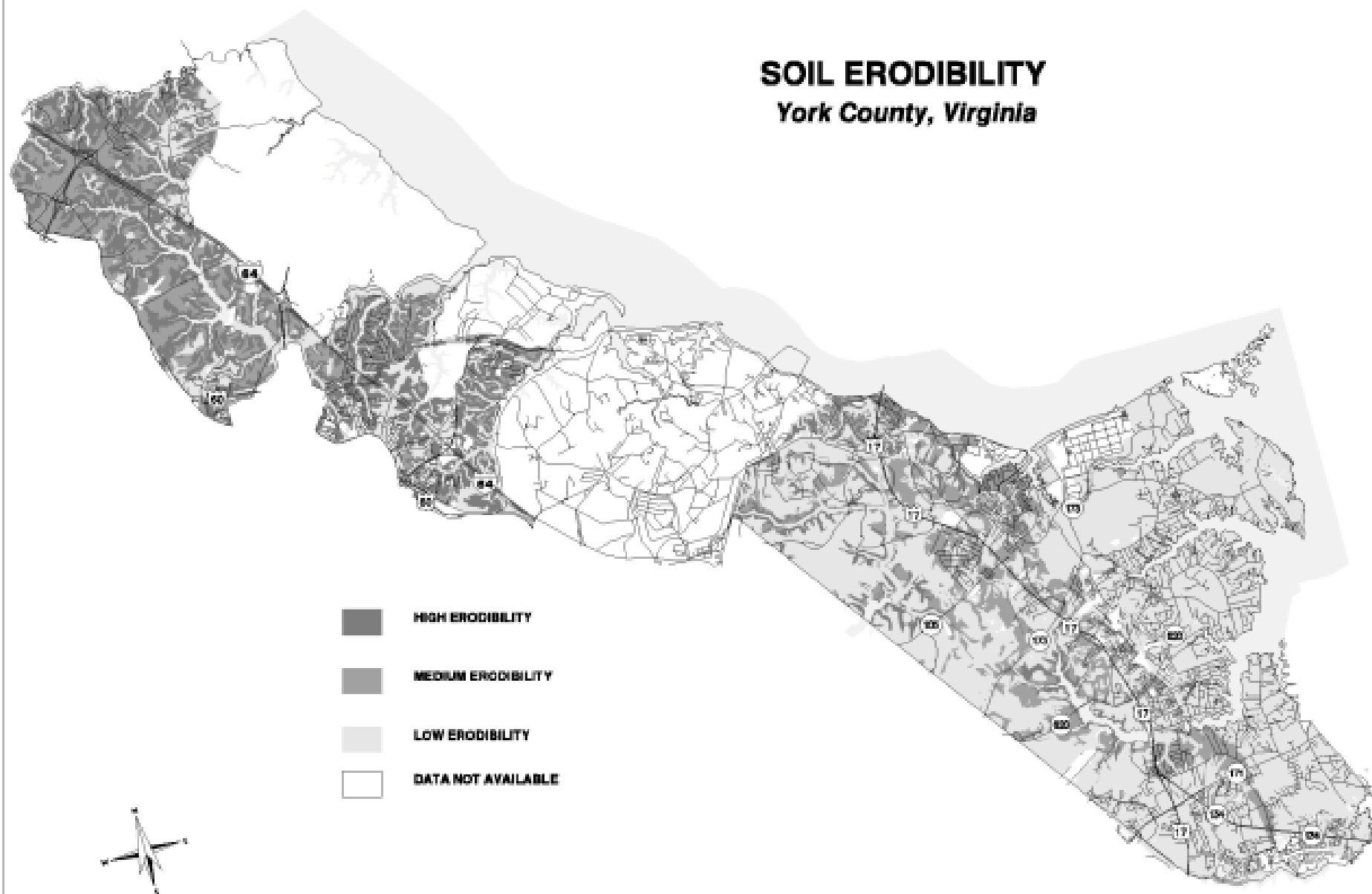
**Areas with water table elevation
within 2-1/2 feet of ground surface**



October 14, 1997
Prepared by York County
Computer Support Services

SOIL ERODIBILITY

York County, Virginia



November 05, 1999
Prepared by York County
Computer Support Services

There are six main soil categories in the County as defined by the Virginia Soils Conservation Service. The different soil types dictate limitations on construction techniques required for successful development in each area. A significant issue that has surfaced in the past several years has been testing and construction requirements associated with shrink-swell soils. To date there have been no major problems in York County but neighboring James City County has experienced major shrink-swell issues.

A significant portion of the County has a high water table defined as being within 2½ feet of the ground elevation. The High Water Table Map indicates those areas that have such ground water elevations. In addition, much of this high water land has been classified as hydric, which means that they stay saturated for enough time during the growing season to develop anaerobic conditions. This soil characteristic is significant in making wetland determinations.

In addition, almost the entire County is characterized by soils with severe limitations for septic systems. System failures have been reported by the Health Department in various areas of the County. This does not necessarily mean, however, that a septic system will not function properly in a particular area; for site-specific conditions, on-site surveys and samples must be obtained. The combined characteristics of a high water table, slope, permeability, and flood potential make the proper functioning of septic tanks difficult in the lower County.

Erosion and Sedimentation Control

Adequate erosion control measures will minimize site sediment runoff and, as these sediments also tie up phosphorus and nitrogen, such control results in the reduction of nutrients to the receiving waters. The County's Erosion and Sediment Control Ordinance, amended and re-adopted in 1991, requires that all land disturbances greater than 2,500 square feet meet County standards relative to the installation of control systems such as silt fences, straw bales, sediment basins, and check dams to control soil loss.

The Colonial Soil and Water Conservation District provides assistance to Peninsula localities on the conservation of soil, water, and related natural resources. The District staff also works with the agricultural community in preparing conservation plans and advising farmers on proper land management. A member of the York County Board of Supervisors serves as a liaison representative to the District to ensure joint coordination of soil conservation efforts.

WATER QUALITY

York County, for the most part, enjoys high-quality water in both its fresh water and brackish water systems. The protection of water systems in Virginia is the responsibility of the State Water Control Board and its regulatory agency the Department of Environmental Quality and to some extent the State Board of Health. Some specific issues relating to these systems are discussed below. More detailed technical information about water quality, shoreline and streambank erosion, and waterfront access can be found in a separate companion report entitled Charting the Course for the Chesapeake Bay, prepared in 2001 by County Environmental and Development Services Department and Planning Division staff.

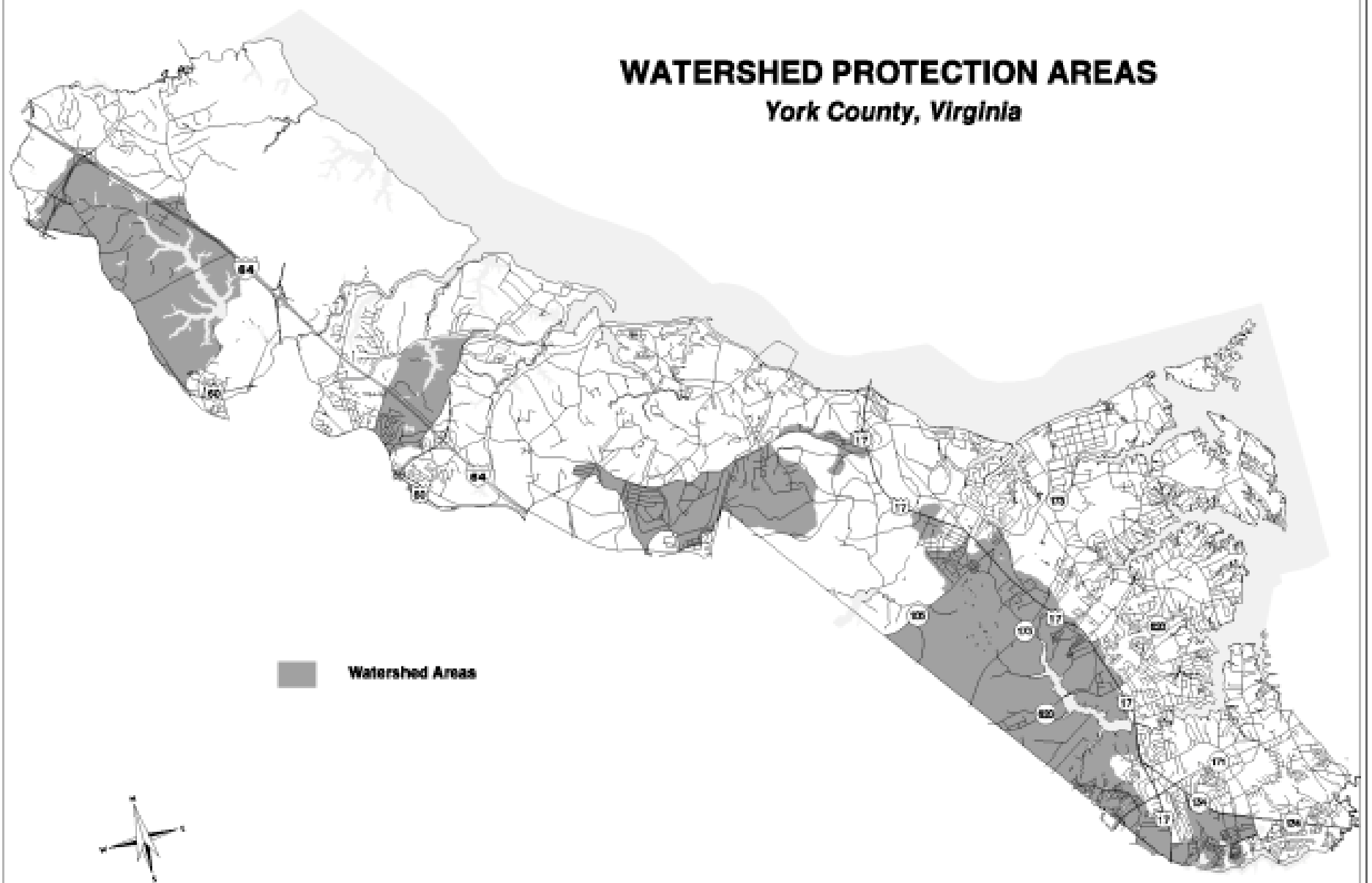
Fresh Surface Water

Most of the fresh surface water in the County comes from the Harwoods Mill, Waller Mill, Lee Hall, Big Bethel Reservoir and Jones Pond. These five drinking water supply reservoirs are protected by watershed protection programs and the Watershed Management and Protection Area overlay district provisions contained in the County's Zoning Ordinance (see the Watershed Protection Areas Map). They all have high quality water except for the Big Bethel Reservoir, where urbanization of the watershed has resulted in less than optimal water quality in the reservoir. The Big Bethel Reservoir is located in an area that is not conducive to effective runoff control because of the high degree of development. This reservoir's use for potable water supply will likely be discontinued in the future. The majority of County citizens receive their drinking water from surface water reservoirs.

Ground Water

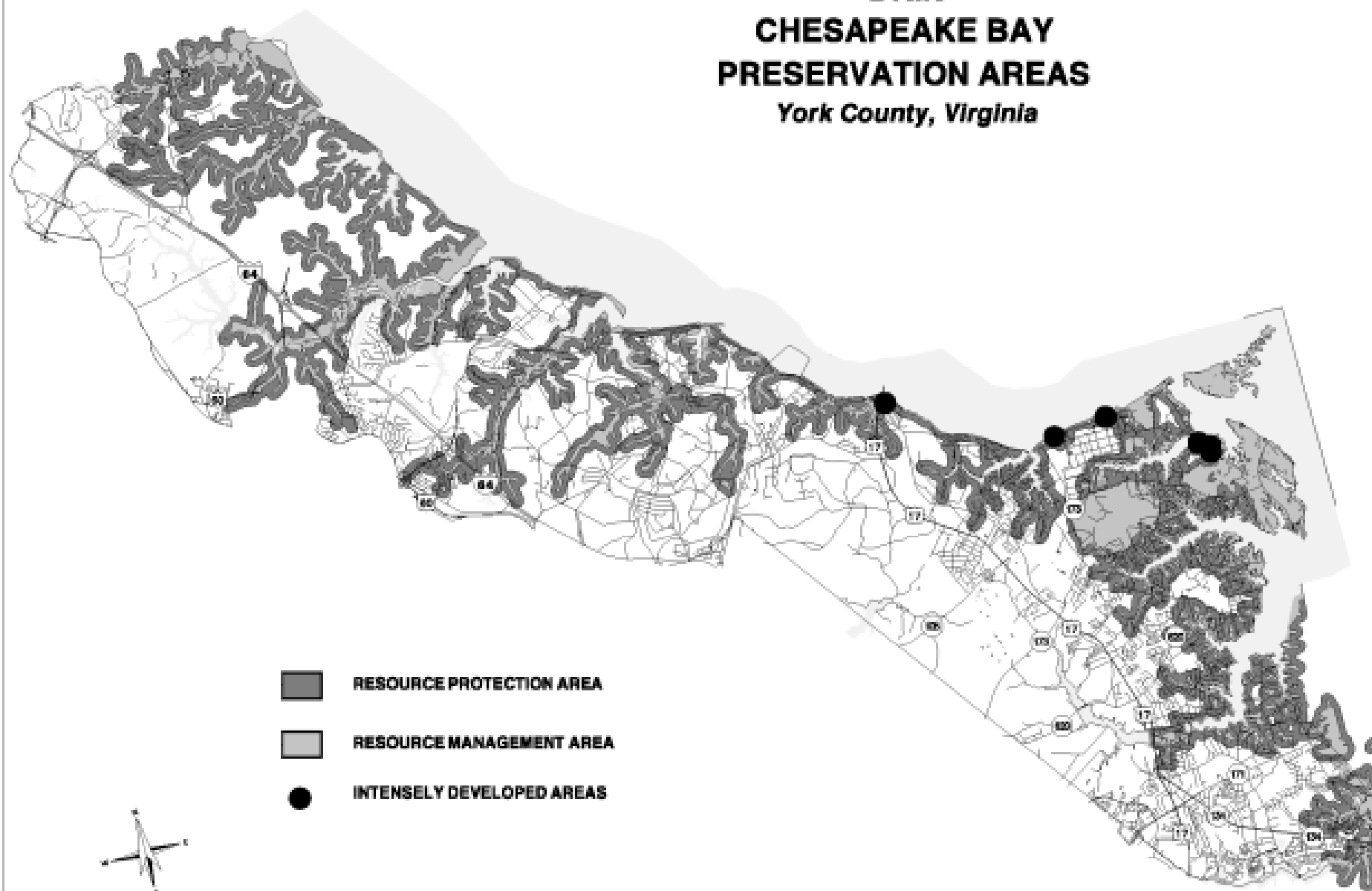
WATERSHED PROTECTION AREAS

York County, Virginia



November 05, 1999
Prepared by York County
Computer Support Services

Draft
CHESAPEAKE BAY
PRESERVATION AREAS
York County, Virginia



November 05, 1999
Prepared by York County
Computer Support Services

Ground water is directly related to surface water and is itself an important drinking water source. It is contained in underground formations called *aquifers* that store, disperse, and transmit water. The ground water in York County consists of an unconstrained aquifer underlain by six confined aquifers. The three lowest aquifers, the upper, middle and lower Potomac, have been declining an average of two feet per year for at least the past twenty-five years, largely because of increased production from large ground water users such as the paper mill in West Point and food processors on the south side of the James River. The County's five wells and many homes in the upper County utilize the Chickahominy Piney-Point aquifer.

Brackish Water

The water quality of the York River and its estuaries in York County is acceptable for full body contact. The only significant problem is high fecal coliform counts in some areas that preclude direct marketing of shellfish. In general, these high levels are attributable to septic systems operating in areas with high water tables where the inadequate distance between the bottom of the drain field piping and the water table does not provide sufficient detention time for the required bacterial reduction. The County has an ongoing program based on a priority system driven by environmental and public health needs to install sanitary sewer systems in these areas.

York County has two industrial dischargers, three municipal dischargers, and two federal dischargers that operate under Virginia Pollution Discharge Elimination System (VPDES) permits for point source discharges to the York River. These facilities meet or exceed federal guidelines established under the Clean Water Act.

The EPA enacted the National Pollution Discharge Elimination System (NPDES) Phase II program in 1999. York County must submit a stormwater discharge permit for compliance with this program by the year 2003. The purpose of these regulations is to address non-point source discharges such as storm water that is a major contributor to the sediment and nutrient loadings in estuaries, rivers and the Chesapeake Bay. These regulations, along with Virginia's concentration on water basin control strategies, are expected to improve the waters around York County.

Chesapeake Bay Preservation Act

To counteract the widespread degradation of the Chesapeake Bay, the Virginia General Assembly adopted the Chesapeake Bay Preservation Act in 1988. The Act requires that land be managed in a manner that reduces pollutants entering the Bay by 40% by the year 2000. Local governments are required to implement the Chesapeake Bay Preservation Act provisions since the regulation of land use and development has traditionally been a function of local government. York County incorporated the regulations into its Zoning Ordinance in 1990. In so doing, the Board of Supervisors designated certain areas of the County as Chesapeake Bay Preservation Areas, which include a Resource Protection Area (RPA), Resource Management Area (RMA), and IDA (Intensely Developed Area). Special development standards apply to these areas to ensure that new development will not result in degradation of the bay. Since the adoption of the County's official Chesapeake Bay Preservation Area Map, the quality of data relating to land and its characteristics has greatly improved with the development of the County's geographic information system (GIS). The map that appears in this plan gives a good depiction of the RPA, RMA, and IDA.

In 1995 the State initiated the Tributary Strategies program to further address the forty percent (40%) pollutant reduction goal established under the Chesapeake Bay Preservation Act. Each tributary or watershed will have a strategy developed by the State to address methods to reach that goal. York County drains to three different tributaries: the York River, the James River, and the coastal area of the Chesapeake Bay. York County actively participates in the York River Watershed Forum, which monitors and advises the State on implementation of the York River Basin Tributary Strategy

The Chesapeake 2000 agreement was signed by the Executive Council (the governors of Virginia, Maryland, Pennsylvania; the Mayor of Washington, D.C.; the U.S. EPA Administrator; and the Chesapeake Bay Commission) in June 2000 to rededicate efforts to the restoration and protection of the

Chesapeake Bay system. The Agreement sets six goals to guide the restoration effort over the next ten years.

Wetlands

Wetlands are commonly associated with swamps and marshes. They are often located in tidal areas but can also be found in other areas as well. Non-tidal wetlands can occur wherever there is sufficient water during the growing season to support hydrophytic plants and hydric soils. Wetlands are unique and important ecosystems performing a variety of valuable functions. In particular, wetlands absorb floodwaters, provide habitat for important marine life, filter pollutants and sediment from upland runoff, and provide the first line of defense against shoreline erosion.

The management of wetlands in York County involves federal, state and local regulatory entities. A Joint Permit Application for any work in a wetland area must be submitted to the Virginia Marine Resources Commission (VMRC) for distribution to the County staff and Wetlands Board, the Virginia Department of Environmental Quality (DEQ), and the U.S. Army Corps of Engineers...

The York County Wetlands Board enforces the County's Wetlands Ordinance, reviewing requests for bulkheads, riprap, beach nourishment, etc. in tidal areas,

The Army Corps of Engineers regulates activities in waters of the U.S. The DEQ is currently developing Draft Regulations to implement the Virginia Nontidal Wetlands Act of 2000. The goal of the Virginia regulatory program is to achieve "no net loss" of wetlands acreage and function.

Wetlands in York County are shown on the Wetlands Map. Many of the County's wetlands, including the Goodwin Islands and the Grafton Ponds, are considered to be unique environmental features and are described by the Virginia Department of Conservation and Recreation in the Natural Areas Inventory of the Lower Peninsula of Virginia. These areas are included in the County's Environmental Management Area Overlay District and are subject to special performance standards and afforded the same water quality protection as Chesapeake Bay Preservation Areas.

Wetlands communities along the County's shoreline are classified into seventeen community types. These communities are categorized into five groups for environmental value. Group One communities merit the highest order of protection whereas Group Five marshes have only a few values of significance. When shoreline erosion control issues are being considered, the ranking system can be used as a tool in making decisions.

Shoreline and Streambank Erosion

Shoreline erosion is a naturally occurring process whereby forces, such as storms and the movement of the tides, cause the boundary between land and water to recede and move inland. Erosion can contribute to the sedimentation and pollution of streams, rivers, and the Chesapeake Bay, resulting in the loss of wildlife habitat and reduced water quality and, when severe, threatening property. The increased rate and volume of stormwater runoff associated with development can accelerate the natural process of erosion.

York County encompasses approximately 207 miles of shoreline. The upper County drains via a system of streams and rivers to the southern reach of the York River while the lower County drains via a system of creeks and rivers to the Chesapeake Bay. This section of shoreline includes Back Creek, Chisman Creek, a portion of the Poquoson River, and the western shore of the Chesapeake Bay. Low flat lands with a relatively high water table characterize the topography of the lower County.

The impacts of natural and human activities on the shoreline can be measured by erosion rates, which are used to determine the most appropriate method to address erosion. The Chesapeake Bay Local Assistance Department suggests classifying eroding shorelines as **slight** (less than one foot per year), **moderate** (one to three feet per year), or **severe** (more than three feet per year).

In York County, the western shore of the Chesapeake Bay presents a unique challenge. The only two areas with severe erosion are Reach 109 (the Bay Tree Beach area) and Reach 30 (the Sandbox area west

WETLANDS
York County, Virginia

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of the entrance to the Thorofare). These areas historically experience erosion rates of up to 3.5 feet per year largely as a result of wave action associated with the physical alignment of the shore and prevailing storms. The Wetlands Board has approved several permits along Reach 30 for riprap, breakwaters, and marsh toe stabilization structures.

The remainder of the County and along the York River the rate of erosion is slight to moderate. The shoreline at the mouth of the river is vulnerable to the high-energy waves generated by the dominant northeast storms. The Yorktown historic area and recreational beach is along this shoreline. There is an ongoing project to stabilize the beach with a combination of methods, including riprap, breakwaters, beach nourishment, and vegetation.

The type of erosion control structure needed in a given situation is guided in part by the rate of erosion. Revegetation and re-grading are the preferred methods of non-structural erosion control in areas of slight erosion. Bulkheads are also considered when the property is small and the distance between development and the shoreline precludes re-grading. Riprap revetments are typically encouraged over bulkheads as they are more effective at dissipating wave energy, have a longer life, and provide habitat for marine life.

The amount of bulkhead and bulkhead in conjunction with riprap decreased in York County by approximately 1,620 linear feet and the amount of riprap increased by 2,160 linear feet between 1985 and 1993. Miscellaneous structures and the amount of unstable shoreline also declined. These trends provide positive evidence that environmentally sound shoreline erosion techniques are being implemented.

One of the County's goals is to protect shoreline property in a cost-effective manner that preserves and enhances shoreline resources, water quality, wetlands, and wildlife habitat. The Wetlands Board works toward this goal by strongly encouraging applicants to obtain assistance from the appropriate state agencies and County staff for shoreline erosion control projects. When shoreline erosion is severe and threatens properties, the Wetlands Board will consider structural shoreline stabilization methods located in wetlands of lesser ecological value. When shoreline erosion is slight to moderate, the Board encourages non-structural measures such as re-grading and re-vegetating. The Wetlands Board encourages coordination of shoreline erosion control projects among properties by mandatory notification of all adjacent property owners, posting of "Wetlands Permit Pending" signs and encouraging group permits. On properties with adequate separation between structures and the shoreline, the Wetlands Board favors regrading/revegetating and riprap revetments over bulkheads. Maximizing the vegetated buffer in accordance with the provisions of the Chesapeake Bay Preservation Act reduces the need for structural controls, which must be considered only a temporary correction for erosion problems. The goal should be to direct future development and redevelopment away from severely eroding shorelines to areas that can be developed without adversely affecting water quality. As stated previously, there are two reaches of shoreline in York County that are classified as severely eroding, Reaches 30 and 109. The remaining undeveloped lots along Reach 30 are zoned WCI (Water-Oriented Commercial Industrial) and are owned primarily by BP Amoco and Virginia Power. Residential development in the WCI zone is not permitted by right or by special use permit. Any future commercial or industrial development must adhere to the CBPA 100-foot setback from the edge of the eroding shoreline. Reach 109, Bay Tree Beach, is zoned RC (Resource Conservation), which is intended for those areas in the County of particular environmental sensitivity. The minimum residential lot area is five acres; therefore, the CBPA requirement for a 100-foot vegetated buffer area will ensure that no development occurs along the eroding shoreline.

In addition to the shoreline areas previously noted, there are streams and ditches in the County showing evidence of deterioration and erosion. Some of these streams are identified in the County's Utilities Strategic Capital Plan. The Board of Supervisors also has formed a Drainage Advisory Committee whose purpose is to assist County staff in identifying drainage problems and prioritizing areas for drainage improvements. The Marlbank Ravine Restoration Project is currently underway utilizing a combination of options, including bioengineering, regrading, revegetating, and, where necessary, piping.

Stream bank erosion, like shoreline erosion, is a natural process, with many of the same negative impacts. Natural factors that contribute to stream bank erosion, are steep slopes and highly erodible soils. Development on steep slopes greater than 15% is regulated through the Zoning and Subdivision Ordinances to ensure the integrity of slopes and waterways.

Stream bank erosion is more often directly related to land use and development than is shoreline erosion. There are streams and ditches in the County showing evidence of deterioration and erosion. Some of the streambank erosion is due to natural causes; however, some is due to upstream development and conventional ditch maintenance. Many of these streams have been identified in the County's Utilities Strategic Capital Plan for restoration. The County's Drainage Advisory Committee works to assist County staff in identifying erosion, flooding and drainage problems and prioritizing areas for improvements.

York County limits stormwater runoff from developed sites to pre-development rates through the strict application of the Erosion and Sediment Control regulations, which require that properties and waterways downstream of development be protected from sediment deposition, erosion, and damage caused by increases of volume, velocity, and peak flow rates of stormwater runoff for certain storm events. Inevitably, however, the volume and duration of stormwater runoff are increased with increased amounts of impervious area. Pursuant to the Erosion and Sediment Control Ordinance, the County requests calculations proving downstream adequacy. When possible, stream banks will be restored to a natural state using bioengineering options with contiguous floodways. Piping will be used as a measure of last resort. In this manner, stormwater management, erosion control, non-point source pollutant, and habitat creation goals will be achieved.

Based on this information, shoreline and streambank erosion are significant issues for York County. The Wetlands Board is doing an admirable job of preventing shoreline erosion while limiting hardening of the County's tidal shoreline. The County has begun a streambank restoration project at Brown's Park in Lackey which will serve as a pilot program for bioengineering techniques. The Utilities Strategic Capital Plan addresses the streambanks that have been targeted for stabilization. In addition, the Drainage Advisory Committee and the County are reviewing erosion and flooding problems to prioritize streambanks not addressed in the Capital Plan.

Flood Zones

York County is in a tidal area with some areas in low and relatively flat terrain. Coastal flooding is a potential hazard, affecting approximately 7,000 acres of land close to coastal streams and creeks. The flat topography of the Seaford and Dandy areas results in flooding during major storms. Through the National Flood Insurance Program (NFIP), property owners can obtain flood insurance through the private insurance industry at a reasonable cost.

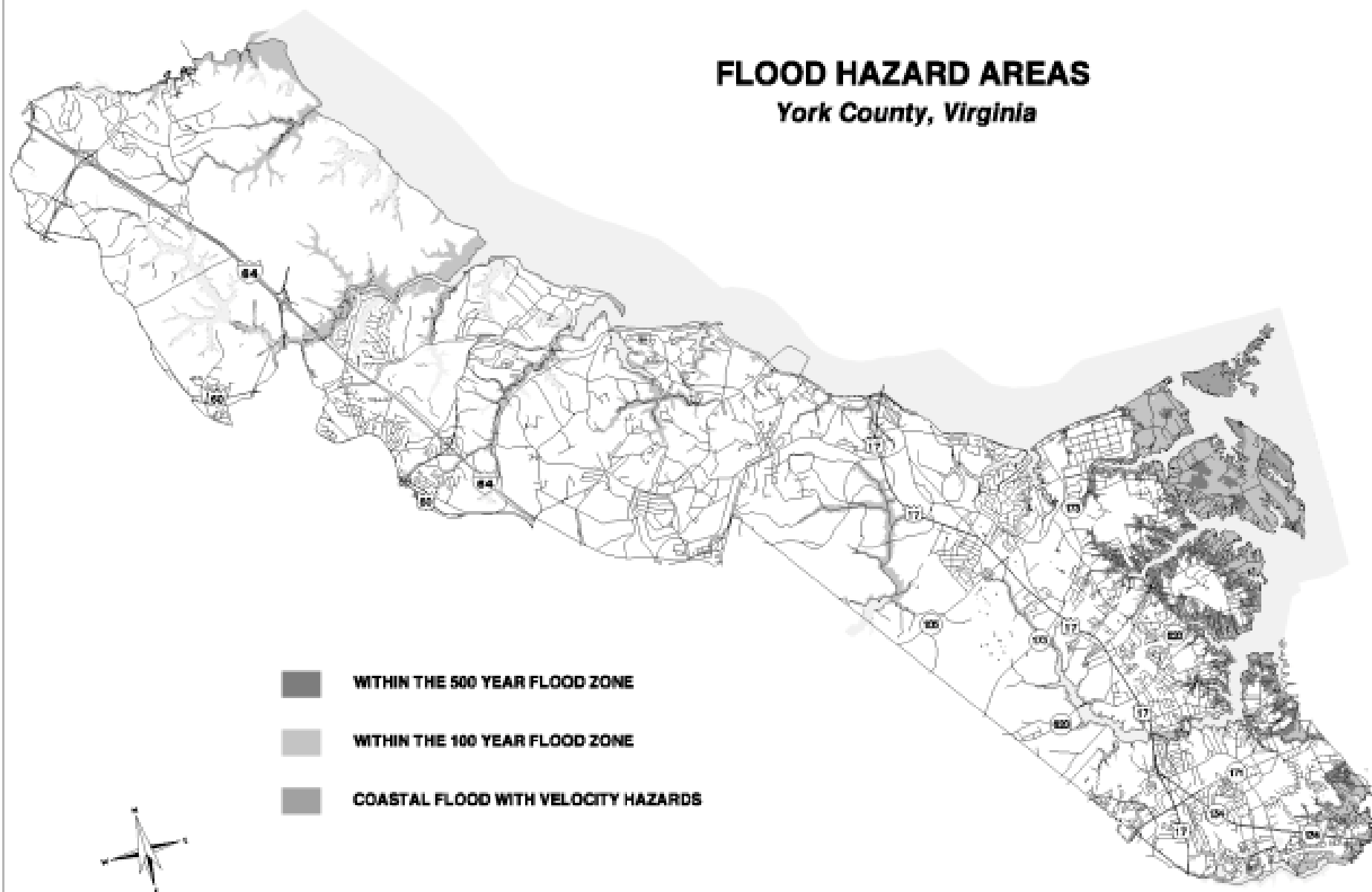
York County established plans and adopted regulations to lessen potential losses from flood damage. Regulations must be consistent with the NFIP. These regulations apply to those portions of a locality which are within the "100-year floodplain." (This means that the probability of a flood occurring is once in 100 years). The Flood Hazard Areas Map shows those areas of the County identified by the Federal Emergency Management Agency (FEMA) as being located in a flood hazard area. Communities participating in the NFIP require newly constructed and substantially improved residential structures in the special flood hazard areas to have the lowest floor elevated above "the base flood level." Non-residential structures must either elevate the lowest floor or design the structure to be watertight. In an effort to reduce losses even further, FEMA has recently developed a voluntary program known as the "Community Rating System" by which communities can augment their existing floodplain protection programs in ways which may reduce loss-payouts should a flood event occur. In return for implementing this, the Federal Insurance Administrator can grant small general reductions in premium rates within the community.

WASTE MANAGEMENT

Since the adoption of the Comprehensive Plan in 1991, and as a direct result of the recommendations contained in that plan, the County's waste management program has changed dramatically. Most significantly, the County initiated a roadside trash pickup program for all single-family detached homes through a contract with a private waste operator. Previously there had been no County trash collection; individual homeowners and homeowners' associations were responsible for contracting out with a private hauler for their trash collection. A curbside recycling program was also established, and a leaf and yard

FLOOD HAZARD AREAS

York County, Virginia



WITHIN THE 500 YEAR FLOOD ZONE



WITHIN THE 100 YEAR FLOOD ZONE



COASTAL FLOOD WITH VELOCITY HAZARDS



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Prepared by York County
Computer Support Services

debris collection program was initiated during the 1997-98 leaf season. The County has expanded its drop off recycling program to include waste oil, antifreeze, batteries, paper and tires and also participates in the Collection of Household Chemicals Program. The program enable residents to dispose of various chemicals – such as paints, gasoline, brake fluid, pesticides, and drain cleaners – in an environmentally safe manner. These chemicals might otherwise be disposed of via the storm drainage system or be dumped on the ground and possibly contaminating groundwater.

Also since 1991 new Federal and State regulations have gone into effect that would have made it prohibitively expensive for the County to continue to operate a landfill; consequently, the County landfill was closed. At the landfill site, the County has constructed a waste transfer station that is leased to a private operator to receive waste and transport it to approved disposal sites outside the County. There is also a yard waste facility, operated under the direction of the Virginia Peninsulas Public Service Authority (VPPSA), which processes leaves, grass, and woody waste into mulch and compost.

The success of the County's recycling program is demonstrated by the fact that in 1997 York County diverted approximately 42% of its municipal solid waste from the waste stream, well above the State-mandated goal of 25% by 1993.

NOISE

Noise is a growing concern with the addition of new highways and increasing air and automotive traffic. In 1972, Congress established noise emissions standards for new products. The EPA coordinates federal noise research programs and determines whether noise emission standards protect the public health. Although state and local governments do not set standards, noise can be controlled through local regulations and licensing requirements. York County currently regulates noise in public areas and excessive noise from radios, horns, animals, vehicles, and performances.

Aircraft operations at Newport News/Williamsburg International Airport are the principal source of objectionable noise in the County. According to Federal standards, there are some residential areas in the County, most notably the Kentucky Farms subdivision, where noise levels are high enough to be considered so objectionable that residential development is incompatible with aircraft operations. The number of homes adversely affected by aircraft noise is likely to shrink, however, as older, louder jet engines are phased out and replaced as mandated by the Federal Aviation Administration. Moreover, according to the 1997 Airport Master Plan, planned runway extensions will actually reduce noise exposure because of the shift in the aircraft mix from the louder military aircraft to the quieter commercial jets.

The only residentially developed property in the County where Langley Air Force Base (LAFB) aircraft operations generate unacceptable noise levels is in Bethel Manor, which is LAFB housing.

CITIZEN INPUT AND PLANNING POLICIES

The citizens feel the County should place a high priority on preserving and protecting the natural environment, which was ranked in the Comprehensive Plan Review Survey as the third-most important overall goal for the County. Most of the citizens (57%) feel that the environment should take priority over individual property rights when there is a conflict between the two, while about a third believe that environmental regulations are an unreasonable infringement on property rights. The strong support for protecting the environment is also reflected in the fact that a total of 58% of the residents feel that development in environmentally sensitive areas should be either regulated more strictly than ordinary development (37%) or prohibited altogether (21%). About one quarter of the citizens feel that property-owners should be financially compensated for land that cannot be built upon because of environmental regulations, and an additional 8% feel that development of environmentally sensitive areas should not be regulated more strictly than ordinary development.

There are myriad Federal and State agencies that administer a variety of regulations to prevent degradation of the environment. It is not the role of the County government to duplicate these efforts with extraneous regulation. However, as steward of our natural resources, the County government does have a responsibility to do what it can to prevent environmental degradation. A principal role of the County in

protecting the environment is through the regulation of the development and use of land. Not only is land an important natural resource in and of itself, but its development and use also have a significant effect on air and water.

The York County Zoning Ordinance contains provisions to ensure the protection of environmentally sensitive features. Most significant is the Environmental Management Area (EMA) Overlay District, which, as set forth in Section 24.1-372 of the County Code, is intended to “promote the proper use, management, and protection of the vast amounts of sensitive and unique lands which contribute to the economy of the region, and the environmental quality of the County and especially the Chesapeake Bay.” These standards apply specifically to low-lying areas (less than four feet above mean sea level), areas with slopes in excess of 20%, tidal and non-tidal wetlands, Chesapeake Bay Preservation Areas, and areas containing either hydric soils or soils with a moderate or higher shrink-swell potential, and areas identified by the Virginia Department of Conservation and Recreation in the “Natural Areas Inventory of the Lower Peninsula of Virginia.” For any development in these areas, a natural resources inventory and a water quality impact assessment must be provided by the developer, and special performance standards must be met in order for the development to be permitted.

As stated earlier, the Floodplain Management Area (FMA) Overlay District provisions of the Zoning Ordinance regulate construction in flood zone areas. In addition, the Watershed Management and Protection Area (WMP) Overlay District provisions specify development regulations applicable to areas of the County surrounding public water supply reservoirs.

These overlay district regulations are intended not necessarily to preclude development but to ensure that that development which does occur is sensitive to the natural environment. Development and protection of the environment are not mutually exclusive goals. Open space or cluster subdivisions, which are discussed in detail in both the Housing and Land Use elements, are a good example of a development technique that preserves the intricate balance between the natural and built environment.

Another way in which the County is involved is through its public investment decisions, for example, by targeting public sewer extensions toward those areas where the land cannot support septic systems, or by ensuring that public facilities, such as schools and libraries, are located and designed to avoid impacts on environmentally sensitive areas. In these ways, the County can complement ongoing Federal and State efforts in the area of environmental preservation.

A VISION FOR THE ENVIRONMENT

There should be a balance between York County's natural and built environment that positively contributes to the quality of life of both current and future generations.

ENVIRONMENTAL GOALS AND STRATEGIES

GENERAL

- 1 Preserve and protect environmentally sensitive areas and natural resources from the avoidable impacts of land use activities and development.**
 - 1.1 Continue to implement special development regulations to protect natural resources areas, including low-lying areas, areas with steep slopes, tidal and nontidal wetlands, Chesapeake Bay Preservation Areas, areas identified by the Virginia Department of Conservation and Recreation, Division of Natural Heritage in the Natural Areas Inventory of the Lower Peninsula of Virginia, and areas containing hydric or shrink-swell soils.
 - 1.2 Continue to require that development plans identify environmental constraints and opportunities and show how environmental impacts will be mitigated.
- 2 Enhance public awareness and understanding of the importance of environmental conservation and preservation.**
 - 2.1 Consider using public properties, such as parks and watershed areas, as living laboratories to educate school children about environmental conservation and preservation with such activities as nature hikes and observations, environmental experiments, wetlands delineation activities, etc.
 - 2.2 Collaborate with civic groups and community organizations on environmental restoration projects to encourage stewardship.
 - 2.3 Continue to support the Drainage Advisory Committee and provide educational materials concerning environmental conservation and preservation.
 - 2.4 Encourage the School Division to provide, beginning with the class of 2005, a meaningful Bay or stream outdoor experience, such as a field trip, for public school students in accordance with the Chesapeake 2000 Agreement.

AIR

- 3 Improve air quality.**
 - 3.1 Continue to actively participate in all air pollution committees and boards deemed necessary by the Board of Supervisors, such as the Hampton Roads Air Pollution Control District Committee.
 - 3.2 Continue to discourage the recruitment of industries that emit high levels of air pollutants.
 - 3.3 Pursue activities and strategies, including public education efforts, that decrease air pollutants within the Hampton Roads region.
 - 3.4 Prohibit the open burning of leaves and yard debris in proximity to homes and other structures.

- 3.5 Promote alternative modes of transportation that do not rely on single-occupant vehicles, such as mass transit, car-pooling, ride-sharing, bicycling, and walking.

LAND

4 Ensure that land development occurs in recognition of the ability of the land to support such development without environmental degradation.

- 4.1 Promote site design and land development that blends appropriately with natural features and terrain.
- 4.2 Consider working with neighboring localities through the Hampton Roads Planning District Commission to develop a specific carrying capacity model.
- 4.3 Retain natural physical features, forests, and woodland areas throughout the development process.
- 4.4 Maintain tree preservation requirements for all new development.

5 Maintain open space requirements within developing areas for purposes of wildlife habitat and the preservation of ecologically sensitive areas.

- 5.1 Continue to encourage the use of conservation easements as a means of protecting and preserving areas with desirable or sensitive environmental or aesthetic qualities, especially shoreline and groundwater recharge areas.

WATER

6 Ensure the conservation and enhancement of adequate and safe future water supply areas.

- 6.1 Identify potential sources of groundwater and surface water contamination and develop mitigation plans and procedures.
- 6.2 Monitor the septic tank pump-out program and pursue criminal penalties for non-compliance.
- 6.3 Continue enforcement of the requirements of the Watershed Management and Protection Area Overlay District including water quality and vegetative buffers to protect potable water reservoirs.
- 6.4 Support the Virginia Department of Environmental Quality's mandate to prevent destruction of non-tidal wetlands understanding they are important groundwater recharge areas.

7 Ensure existing and proposed public and private access facilities (docks and piers) do not have a negative impact on water quality.

- 7.1 Continue to enforce appropriate methods of construction early in the development process to control sedimentation, pollutant-loading, and stormwater runoff, especially where development takes place in close proximity to water bodies.
- 7.2 Ensure that redevelopment of existing waterfront facilities will reduce non point source pollution and proposed shoreline access will address water quality issues consistent with the Chesapeake Bay Preservation Act.
- 7.3 Encourage community piers in new waterfront housing developments.

- 7.4 Adopt policies to implement the Hampton Roads Planning District Commission (HRPDC) Regional Shoreline Study.
 - 7.5 Implement the guidelines in the Virginia Marine Resources Commission Shoreline Development BMPs Handbook for construction methods and siting criteria.
 - 7.6 Consult the Marina Technical Advisory Program (MTAP), available through the Virginia Institute of Marine Science, on marina siting and design issues related to best management practices, water quality, and technical support for marinas.
- 8 Protect coastal wetlands, marshes, rivers, inlets and other bodies of water from degradation associated with land development.**
- 8.1 Monitor and develop clean-up strategies for illicit discharges.
 - 8.2 Develop and implement a program for re-inspection of Best Management Practices.
 - 8.3 Obtain the stormwater discharge permit in accordance with the NPDES Phase II program.
 - 8.4 Develop and adopt a stormwater management ordinance with water quality requirements.
 - 8.5 Update and continue to rigorously enforce the Erosion and Sediment Control Ordinance to reduce sedimentation and degradation of surface waters.
 - 8.6 Continue to participate in the York River Tributary Strategies effort as a means of improving water quality.
 - 8.7 Reduce the non point source pollutant loading from stormwater runoff on County projects and use indigenous and low-maintenance landscape materials.
 - 8.8 Continue to participate in the Household Chemical Collection System to encourage the safe disposal of chemicals that might otherwise be disposed of via storm drains and dumping.
- 9 Protect shoreline property from erosion in a cost-effective manner that preserves and enhances shoreline resources, water quality, wetlands, riparian buffers, and wildlife habitat**
- 9.1 Encourage applicants for shoreline erosion control projects to seek assistance from the Shoreline Erosion Advisory Service.
 - 9.2 Encourage property owners to utilize nonstructural erosion control measures, such as re-grading and re-vegetation, to address slight to moderate erosion and to utilize structural measures when erosion is severe and threatens property.
 - 9.3 Encourage the coordination of shoreline erosion control measures among adjacent property owners.
- 10 Minimize the need for streambank and shoreline erosion controls.**
- 10.1 Ensure that vegetative buffers are retained, enhanced, or established.
 - 10.2 Ensure that drainage patterns are not altered to concentrate stormwater flow in erodible streams.
 - 10.3 Encourage Low Impact Development and conservation design to reduce impacts to receiving downstream resources.

NOISE

11 Limit noise associated with nonresidential development.

- 11.1 Employ Zoning Ordinance performance standards and other regulatory controls where applicable to minimize noise impacts of nonresidential uses on residential areas.

SOLID WASTE & RECYCLING

12 Achieve a 50% recycling rate.

- 12.1 Encourage recycling by both households and businesses as the preferred means of waste disposal.
- 12.2 Aggressively advertise in local newspapers and the Citizen News the County's solid waste management programs both to inform residents and businesses of program offerings and to educate those already participating in the program.
- 12.3 Expand the list of recyclable items based on participant input and/or market fluctuations.
- 12.4 Expand information/education campaigns to instruct the public on the need for recycling by providing materials to interested businesses, civic and homeowners' associations and any interested party.
- 12.5 Continue to incorporate recycling education into the public school program from elementary school through high school.
- 12.6 Continue to work with the Virginia Peninsulas Public Service Authority (VPPSA) to organize household hazardous waste collection days for materials such as old paint cans, paint thinner, fertilizers and pesticides, etc.

13 Provide for the convenient, efficient, and safe removal and disposal of leaves and yard debris.

- 13.1 Continue the ongoing public information campaign to educate citizens in proper methods of recycling yard waste.
- 13.2 Develop a program to publicly recognize and acknowledge "model" yard waste recycling programs by neighborhoods, groups, and individuals.

14 Expand markets for recycled and recyclable products.

- 14.1 Continue the County purchasing policy emphasizing the purchasing of supplies, where economically feasible, that are made of recycled products and/or are recyclable themselves.
- 14.2 Aggressively market the products of the regional composting facility, including bagged compost material for sale to residents who do not own trucks.

HOUSING

INTRODUCTION
